Name: Abby Simons Date: 6/28/10

Lesson Title: Review of Addition and Subtraction Unit Title: Week 2

Grade Level: 7th

Objectives:

* Students will be able to describe the Lebombo Bone
* Students will be able to calculate the sum and difference of positive and negative integers

Set Induction:

* Take attendance
* Hand back any papers
* (3 min)

Content Outline and Learning Activities:

* First I will show a powerpoint to the students on the Lebombo Bone (mathematical topic of the week). Bring up powerpoint on smartboard.
  + Information to tell the class is on the notes section of the slides
  + (10 min)
* Review Addition and Subtraction from last week
  + Have students take out the Adding Integers worksheet. Go around classroom reading the worksheet (3 min)
  + Then take notes – on subtraction…
    - Subtraction is the inverse of addition. This means that subtraction undoes addition.

For example, if we know that 7 + 3 = 10, then the following is also true,

10 – 3 = 7

10 – 7 = 3

* + - When subtracting a number, we are really adding its opposite.

For example,

-3 – 2 = -3 + (-2) = -5

* + - When subtracting a negative number, the sign will change to positive (because we are adding the opposite).

For example,

7 – (-3) = 7 + (opposite of -3) = 7 + 3 = 10

* + - (5 min)
* Review with students how to use the pog idea with subtraction..give pairs of students positive and negative pogs. When you subtract, you take away. Have them “map” out the pogs using subtraction expressions.
  + Examples…
    - -7 – (-3) = -4
    - -4 – 2 = -6
    - 8 – 3 = 5
  + (6 min)
* Remind students that subtraction adding the opposite of the number you are subtracting.
* KCC rule (review from last Friday 6/25/10)
  + Keep; change sign; change sign
* Students will practice the following addition and subtraction practice problems at their desks.
  + - -6 + 6 = 0
    - 5 + |-4| = 9
    - 15 + (-28) = -13
    - -3 + (-2) + (-1) = -6
    - 10 – 8 = 2
    - (7 min)
* Converting word problems to numerical expressions. Have 4 stations around the classroom with 4 different word problems. Have the students move around the classroom going to each station and solving each problem. Try to have them do as much as possible independently knowing the addition and subtraction rules that we have learned the past two days. Have them record their work and results on the sheet provided (Word Problem Activity) and hand in to me when they have completed the assignment. 2 – 3 students at a station at one time.
  + Station 1 – The Rosen’s had $317 in their checking account. They wrote checks for $74, $132, and $48. What is their checking account balance?
    - 317 – 74 – 132 – 48 = $63
  + Station 2 – Sally solved 40 puzzles during the Whiz Kid contest. Lilly solved 22 more puzzles than Sally. How many puzzles did Lilly solve?
    - 40 + 22 = 62
  + Station 3 – Jocelyn is putting books in her bookcase. She has already put 12 books in her bookcase but has a total of 225 books. How many more books does she have to put in the bookcase?
    - 225 – 12 = 213
  + Station 4 – A climber was 2 meters above the ground. He then climbed up 12 meters. How high is the climber now?
    - 2 + 12 = 14
  + ( 9 min)

Closure:

* Hand out Homework Time Lines Worksheet due tm 6/29/10. Explain how to use addition and subtraction to answer the questions.
* (2 min)

Evaluation Procedure:

* Time Lines Homework due 6/29/10

Additional Notes:

* Lebombo Bone powerpoint
* Pogs
* Adding Integers worksheet from 6/24/10
* Extension to Adding Integers worksheet (subtraction) 6/25/10
* Word problem activity questions
* Word problem activity worksheet for students to fill out
* Additional Practice on Adding and Subtracting Integers Answers
* Time Lines Homework
* Time Lines Answer Key

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Word Problem Activity

Directions: Go around to each station. Write down a numerical expression for the word problem. Then solve the expression to answer the word problem. Hand in worksheet when finished.

Station 1:

Numerical Expression:

Answer:

Station 2:

Numerical Expression:

Answer:

Station 3:

Numerical Expression:

Answer:

Station 4:

Numerical Expression:

Answer:

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Due Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Time Lines Homework

A time line is a number line marked off in dates rather than in integers. On the History of Mathematics time line below, dates labeled B.C.E. fall where the negative integers normally lie. Dates labeled C.E. replace the positive integers. Years given are dates of birth.

C.E.

B.C.E.

Aryabhata

526

Ptolemy

98

0

Plato

429

Hero

250

Euclid

330

Pythagoras  
569

Brahmagupta

640

Archimedes

287

Find the number of years between the given events. Write a subtraction expression. Then simplify.

1. the births of Euclid and Hero \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. the births of Pythagoras and Archimedes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. the births of Brahmagupta and Ptolemy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Legend has it that Rome was founded in 753 B.C.E. How many years after the founding of Rome was Plato born? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. One mathematician was born as many years before Ptolemy as Aryabhata was born after Ptolemy. Which one?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Which mathematician was born 1,069 years before Brahmagupta?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: Answer Key

Due Date: 6/29/10

Time Lines Homework

A time line is a number line marked off in dates rather than in integers. On the History of Mathematics time line below, dates labeled B.C.E. fall where the negative integers normally lie. Dates labeled C.E. replace the positive integers. Years given are dates of birth.

C.E.

B.C.E.

Aryabhata

526

Ptolemy

98

0

Plato

429

Hero

250

Euclid

330

Pythagoras  
569

Brahmagupta

640

Archimedes

287

Find the number of years between the given events. Write a subtraction expression. Then simplify.

1. the births of Euclid and Hero: 250 - (-330) = 580
2. the births of Pythagoras and Archimedes: -287 - (-569) = 282
3. the births of Brahmagupta and Ptolemy: 640 – 98 = 542
4. Legend has it that Rome was founded in 753 B.C.E. How many years after the founding of Rome was Plato born?

-429 - (-753) = 324

1. One mathematician was born as many years before Ptolemy as Aryabhata was born after Ptolemy. Which one?

Euclid: 526 – 98 = 428... 98 – 428 = -330. 330 BCE Euclid.

1. Which mathematician was born 1,069 years before Brahmagupta?

Plato 640 – 1069 = -429. 429 BCE Plato.

Name: Abby Simons Date: 6/29/10

Lesson Title: Money Simulation Unit Title: Week 2

Grade Level: 7th

Objectives:

* The students will be able to practice different properties of integers by managing a “fake” account

Set Induction

* Take attendance
* Have students fill in homework in their logs. Come around and sign logs when filled
* Hand back any papers
* Ask students if they have ever managed a check book before or dealt with their own money, keeping records of things. Explain that we are going to do a simulation today that will practice using integers and decimals but also teach them a real life application of algebra.
* (5 min)

Content Outline and Learning Activities

* Go through the Time line homework from previous night with the students. Explain each step. have them hand in work when review. (10 min)
* Money Activity
  + First explain purpose to kids and explain what we are going to do…I will give them each to begin $50. This will be the starting balance in their account. we will make a store simulation so that they can learn how to manage their own account. they will be able to buy things at this “store” and must make sure they have enough money before buying the items at the store. They will keep track of their accounts and what they spend on a worksheet. Also, at certain points they will get back money for a pay-day, must also put this onto their worksheet. At the end of the activity, they will have to explain in front of the class, what their final balance was and each thing they spent.
  + Handout money to students and recording worksheets. Set up stations around the classroom with what they can buy and how much each thing is.
  + Students will be free to go around classroom spending their money but must keep the records documented on their worksheet.
  + Throughout the time I give them to spend their money, give them a total of 2 $10 for their pay-day.
  + Give students 15 min to spend and record their balances.
  + After, students will stand in front of the class and present their final tallies.
  + (20 - 25 min)
* Introduce multiplication of integers.
  + Example. You are going to the store and you need 20 cookies for a party. The store only has boxes of cookies with 10 cookies each. How many boxes of cookies do you need?
    - Ask students how they would solve it.
      * Can use addition or multiplication to solve the question. Either 10 + 10 = 20 (so 2 boxes of cookies). Or 2 \* 10 = 20 ( 2 boxes of 10 cookies.. so need 2 boxes).
  + Second example. Diagram to students on the board. 4 sets of negative 2 pogs. Ask them how they would find how many pogs we have??
    - Answers.. found using addition of multiplication. Can do -2 + -2 + -2 + -2 = -8 (-2 added 4 times). Or can use multiplication… we know we have -2 pogs and want 4 sets of them, so multiply -2 \* 4 = -8.
  + (5 min)

Closure

* Reflect on money simulation. What they learned. How integers can be used in their lives; want to translate math into the real world
* Handout homework – more word problem practice using properties of integers, Word Problem Practice due 6/30.
* (3 min)

Evaluation Procedure

* Word Problem Practice due 6/30

Additional Notes

* Time line homework answers
* Money simulation stations
* Money simulation recording balance worksheet
* Pogs
* Word Problem Homework
* Word Problem Answers

SHOE STORE

Items to be purchased: Price:

Converse $29.99

Vans $15.00

Nike $21.00

GAP CLOTHING

Items to be purchased: Price:

Jeans $22.00

Polo $9.99



School Store

Items to be purchased: Price:

Candy $1.00

Soda $1.50

Summerbridge T-shirt $13.99

Sports Store

Items to be purchased: Price:

Football $7.99

Soccer ball $6.99

Ice Cream Shop

Items to be purchased: Price:

One Scoop $1.50

Two Scoop $3.00

Banana Split $5.00

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Money Activity Checkbook

Directions: Each student will be given $50 initially in their balance. Go around the classroom to spend your money at the different stores set up throughout the classroom. When you buy items, you must keep track of how much money you have in your balance. Show all work because when the activity is over, you will have to present your findings to the classroom.

**Initial Balance = $50**

|  |  |  |  |
| --- | --- | --- | --- |
| Item to be Purchased | Price | Work to calculate Balance | Updated Balance after Purchase |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  | Final Purchase is… |

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Due Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Word Problem Homework

Directions: Solve the following problems and show your work.

1. Sue bought a donut and a cookie at the store. If a donut costs 50 cents and a cookie costs 35 cents, how much did Sue spend?

Answer = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cents

1. Sara has 12 apples, 3 oranges, and 4 peaches. She then gave 5 apples, 1 orange, and 4 peaches to her friend Jon. How many pieces of fruit does she have now?

Answer = \_\_\_\_\_\_\_\_\_\_ pieces of fruit

1. In a student election 302 students voted for one or the other of two candidates for president. One candidate received 132 votes and the other candidate received 157 votes. How many students did not vote?

Answer = \_\_\_\_\_\_ students

1. Jim can row his boat upstream at four kilometers per hour, and downstream at six kilometers per hour. If Jim rowed 5 kilometers upstream and 12 kilometers downstream, how many kilometers did he row in total?

Answer = \_\_\_\_\_\_\_ kilometers

1. A submarine dove to 328 feet below sea level. It dove another 289 feet before rising 300 feet. What integer represents the new position of the submarine in relation to sea level?

Answer = \_\_\_\_\_\_\_ feet

Name: Answer Key

Due Date: 6/30

Word Problem Homework

Directions: Solve the following problems and show your work. Make sure you include

1. Sue bought a donut and a cookie at the store. If a donut costs 50 cents and a cookie costs 35 cents, how much did Sue spend?

50 cents + 35 cents = 85 cents

1. Sara has 12 apples, 3 oranges, and 4 peaches. She then gave 5 apples, 1 orange, and 4 peaches to her friend Jon. How many pieces of fruit does she have now?

(12 + 3 + 4) – (5 + 1 + 4) = 9 pieces of fruit

1. In a student election 302 students voted for one or the other of two candidates for president. One candidate received 132 votes and the other candidate received 157 votes. How many students did not vote?

302 – (132 + 157) = 13 students

1. Jim can row his boat upstream at four kilometers per hour, and downstream at six kilometers per hour. If Jim rowed 5 kilometers upstream and 12 kilometers downstream, how many kilometers did he row in total?

5 + 12 = 17 kilometers

1. A submarine dove to 328 feet below sea level. It dove another 289 feet before rising 300 feet. What integer represents the new position of the submarine in relation to sea level?

(-328) – 289 + 300 = -317

Name: Abby Simons Date: 6/30/10

Lesson Title: Multiplying Integers Unit Title: Week 2

Grade Level: 7th

Objectives:

* Students will be able to calculate the product of integers, both positive and negative.

Set Induction:

* Take attendance
* Hand back papers
* Have students fill in homework logs. When finished, I will come around and sign them.
* Introduce multiplying integers…similar to multiplying counting numbers. But when we multiply integers, we must take into account the signs of the integers being multiplied, because integers can be both positive and negative.
* (5 min)

Content Outline and Learning Activities:

* Review Word Problem Homework from last night with the class. Students will hand in homework when review it. (7 min)
* Talk to the students about the word problem exercises that we have been doing and will continue to keep doing them the rest of the summer. Eventually when we learn more algebra they will start making word problems themselves to test their knowledge of the material. Hand out worksheet for students to read and keep in their notebook so they can use it to help them create their own mathematical word problems. (5 min)
* Now move on the multiplication…
  + Talk about how students are familiar with multiplying whole numbers (just positive, not negative). Multiplying integers is similar to multiplying whole numbers, but we have signs to worry about with integers. Integers can be both positive and negative, while the whole numbers are positive. If integers have varying signs, then we must take sign into account when finding their product. When we multiply two numbers that means we are finding their product. If a question states to find the product, it means to multiply the numbers in question. (5 min)
  + Hand out Multiplication Notes and Practice Questions Sheet
    - Fill in Multiplication Rules with the students – Multiplying integers is similar to multiplying the counting numbers. However, you must take into account the sign of the integers in order to determine the sign of the product. The product of integers with the same sign is positive. The product of integers with the opposite sign is negative.
    - (3 min)
* Have students move to work in pairs to complete the rest of the Multiplication Notes and Practice Questions Sheet. When they are done, we will go over the answers as a class. Answer all questions. (15 min)

Closure:

* Ask students if true or false…
  + The product of two negatives is positive. True
  + The difference of two positives is always positive. False (what if number being subtracted is greater than the first number…than get negative answer)
  + The sum of two positives is positive. True
* Hand out homework due 6/25/10 – Multiplying Integers
* (3 min)

Evaluation Procedure:

* Multiplying Integers Homework due 7/1/10

Additional Notes:

* Word Problem Homework Answers from 6/30
* Word Problem Help Guide
* Multiplication Notes and Practice Questions Sheet
* Multiplication Notes and Practice Questions Sheet Answers
* Multiplying Integers Homework
* Multiplying Integers Answer Key

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Word Problem Help Guide

Two steps for solving word problems:

1. Translate the wording into a numerical equation
2. Solve the equation

Tips:

1. Read the whole problem
2. List information and identify the unknown variables. Make sure you attach units of measure to the variables (for example, gallons and miles)
3. Define the answer you are looking for and its units of measure
4. Keep your work organized. Make sure you label any diagrams and explain each step of your process.
5. Look for “key” words in the word problem that may give you a hint about how to solve the problem. Key words can indicate certain mathematical operations.
   1. Addition(+)
      1. increased by
      2. more than
      3. combined together
      4. total of
      5. sum
      6. added to
   2. Subtraction (-)
      1. Less than
      2. Fewer than
      3. Reduced by
      4. Decreased by
      5. Difference of
   3. Multiplication (\*, x)
      1. Of
      2. Times
      3. Multiplied by
   4. Division (/ , ÷)
      1. Per
      2. Out of
      3. Ratio of
      4. Quotient of
      5. Percent (divide by 100)

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Multiplication Notes and Practice Questions

Multiplication Rules:

1. Multiplying integers is similar to multiplying the counting numbers. However, you must take into account the sign of the integers in order to determine the sign of the product.
2. The product of two integers with the *same* sign is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. The product of two integers with *opposite* signs is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Complete the table. The first row is filled in as an example.

|  |  |  |
| --- | --- | --- |
|  | Integers have the same or opposite sign? | Sign of product? |
| -5 \* 12 | Opposite  5 negative  12 positive | negative |
| 6 \* 8 |  |  |
| -3(-6) |  |  |
| 11\*(-5) |  |  |
| -12(6) |  |  |
| 13 \* 3 |  |  |

Find the product of the following questions. Use mental math to determine the products.

1. 4(-5) = \_\_\_\_\_\_
2. (-1)(-5) = \_\_\_\_\_\_
3. 5 \* 7 = \_\_\_\_\_\_\_
4. -40 \* (-10) = \_\_\_\_\_\_
5. (-7)(-3)(6) = \_\_\_\_\_\_
6. 2(-5) = \_\_\_\_\_\_
7. 13 \* 3 = \_\_\_\_\_\_
8. (-11) \* (-4) = \_\_\_\_\_\_

Name: ANSWERS

Date: 6/30/10

Multiplication Notes and Practice Questions

Multiplication Rules:

1. Multiplying integers is similar to multiplying the counting numbers. However, you must take into account the sign of the integers in order to determine the sign of the product.
2. The product of two integers with the *same* sign is \_\_\_positive\_\_\_.
3. The product of two integers with *opposite* signs is \_\_\_negative\_\_\_.

Complete the table. The first row is filled in as an example.

|  |  |  |
| --- | --- | --- |
|  | Integers have the same or opposite sign? | Sign of product? |
| -5 \* 12 | Opposite  5 negative  12 positive | negative |
| 6 \* 8 | Same  Both positive | positive |
| -3(-6) | same  both negative | Positive |
| 11\*(-5) | opposite  11 positive  5 negative | Negative |
| -12(6) | opposite  12 negative  6 positive | Negative |
| 13 \* 3 | same  both positive | Positive |

Find the product of the following questions. Use mental math to determine the products.

1. 4(-5) = \_\_-20\_\_
2. (-1)(-5) = \_\_5\_\_
3. 5 \* 7 = \_\_35\_\_
4. -40 \* (-10) = \_\_400\_\_
5. (-7)(-3)(6) = \_\_126\_\_
6. 2(-5) = \_\_-10\_\_
7. 13 \* 3 = \_\_39\_\_
8. (-11) \* (-4) \* (-1) = \_\_-44\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Due Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Multiplying Integers Homework

Evaluate. Use mental math to determine the products.

1. 23 \* 16 = \_\_\_\_\_\_
2. -24 \* 4 = \_\_\_\_\_\_
3. 5(-1)(-9) = \_\_\_\_\_
4. -3 \* 7 \* (-2) = \_\_\_\_\_
5. 15(-3) = \_\_\_\_\_

Compare. Use >, <, or = to complete each statement. Be sure to show each product.

[Hint – find the product of each side first, then compare]

1. -7(5) \_\_\_\_ -6(-6)
2. -20 \* (-5) \_\_\_\_ 10 \* |-10|
3. -3(6) \_\_\_\_ 6(-3)

Write a multiplication sentence and then solve to answer the question.

1. The temperature dropped 4 degrees each hour for 3 hours. What was the total change in temperature?

Name: ANSWER KEY

Due Date: 7/1/10

Multiplying Integers Homework

Evaluate. (Find each product). Use mental math to determine the products.

1. 23 \* 16 = \_\_368\_\_
2. -24 \* 4 = \_\_-96\_\_
3. 5(-1)(-9) = \_\_45\_\_
4. -3 \* 7 \* (-2) = \_\_42\_\_
5. 15(-3) = \_\_-45\_\_

Compare. Use >, <, or = to complete each statement. Be sure to show each product.

[Hint – find the product of each side first, then compare]

1. -7(5) \_\_<\_\_ -6(-6)

-35 36

1. -20 \* (-5) \_\_=\_\_ 10 \* |-10|

100 100

1. -3(6) \_\_=\_\_ 6(-3)

-18 -18

Write a multiplication sentence and then solve to answer the question.

1. The temperature dropped 4 degrees each hour for 3 hours. What was the total change in temperature?

Multiplication sentence … 3(-4) = -12.

Temperature dropped a total of 12 degrees.

Name: Abby Simons Date: 7/2/10

Lesson Title: Dividing Integers, Average, and Word Problems Unit Title: Week 2

Grade Level: 7th

Objectives:

* Students will be able to calculate the quotient of integers, both positive and negative.
* Students will be able to transfer their knowledge of adding and dividing integers to taking averages.
* Students will be able to interpret word problems and convert them into numerical expressions.

Set Induction:

* Take attendance
* Hand back papers
* Go over Multiplying Integers Homework from last night.
* Collect homework when done answering questions.
* (6 – 7 min)

Content Outline and Learning Activities:

* Dividing integers/finding the quotient.
  + Have students take notes in their notebook.
  + Similar to dividing counting numbers. Only difference is we have to take sign into account. Just like we discussed yesterday for multiplication.
  + So the rules about sign hold for both multiplication and division of integers… The quotient of two integers with the same sign is positive. The quotient of two integers with opposite signs is negative.
  + (5 min)
* Do practice examples of dividing numbers on the board. Have students pair up and take a section of the board. I will give them the question and they will find each quotient, including sign.
  + -18 / 2 … -9
  + 12 / (-4) … -3
  + (-25) / (-5) … 5
  + -30 / (-6) … 5
  + 21 / 3 … 7
  + Students sit down when finished.
  + (7 min)
* Now how to take averages…
  + Students are to take these notes in their notebooks.
  + The average is the sum of the numbers divided by how many numbers there are. It’s the middle number in a list. For example, say there are 20 students in the class and you have all of their grades. To find the average test result, add all of the test scores, then divide by the number of students in the class (20).
  + Do example on board. Question – you are given 5 temperatures, 6 degrees, -15 degrees, -24 degrees, 3 degrees, and -25 degrees and asked to find the average temperature.
    - Step 1: add the temperatures you are given. 6 + (-15) + (-24) + 3 + (-25). Get -55.
    - Step 2: divide the sum (-55) by 5 (how many temperatures we were given). -55 / 5 = -11
    - So, our average temperature is -11 degrees.
  + (7 min)
* Word Problem activity. Hand out word problems worksheet. Tell students to sit in pairs to do the activity. Hand in activity when done. (15 min)

Closure:

* No homework, 4th of July Holiday Weekend!! Happy weekend!
* Put these two statements on board. Ask the students to complete the statements using <, >, =.
  + -20 / 4 \_\_\_\_ 3 + 7 (-5 \_<\_ 10)
  + 5\*(-3) \_\_\_\_ 5 – 20 (-15 \_=\_ -15)
* (4 min)

Evaluation Procedure:

* None!

Additional Notes:

* Multiplying Integers Answer Key
* Word Problem Activity
* Word Problem Activity answers

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Word Problem Activity

Directions: Work in pairs to complete the following activity. When you are finished, hand in your paper and sit at your desk quietly. Write out a numerical expression for each question and then solve the expression to find the solution to the question.

1. Ms. Pepper gave an exam to her 8th grade Algebra class. After grading the tests, she wanted to know the average of the exams. If the grades were 95, 86, 73, 93, and 78, what was the test average?
2. Sally went to the grocery store for three boxes of strawberries, one tomato, five bananas, and two bags of potato chips. If one box of strawberries costs $2, one tomato costs $1, one banana costs $1, and one bag of chips costs $3, how much was Sally’s bill?
3. Jenna opened a savings account with a $50 deposit. She made 3 more deposits of $15 each and 2 withdrawals of $10 and $25.
   1. What is the total amount Jenna has withdrawn from her account?
   2. What is the total amount currently in Jenna’s account?
4. John had 30 brownies and 6 friends at his house. In order to share the brownies equally between his friends, how many brownies can he give to each friend?

Name: ANSWERS

Date: 7/2/10

Word Problem Activity

Directions: Work in pairs to complete the following activity. When you are finished, hand in your paper and sit at your desk quietly. Write out a numerical expression for each question and then solve the expression to find the solution to the question.

1. Ms. Pepper gave an exam to her 8th grade Algebra class. After grading the tests, she wanted to know the average of the exams. If the grades were 95, 86, 73, 93, and 78, what was the test average?

(95+86+73+93+78)/5 = 85

1. Sally went to the grocery store for three boxes of strawberries, one tomato, five bananas, and two bags of potato chips. If one box of strawberries costs $2, one tomato costs $1, one banana costs $1, and one bag of chips costs $3, how much was Sally’s bill?

3($2) + 1($1) + 5($1) + 2($3) = $18

1. Jenna opened a savings account with a $50 deposit. She made 3 more deposits of $15 each and 2 withdrawals of $10 and $25.
   1. What is the total amount Jenna has withdrawn from her account?

$10 + $25 = $35

* 1. What is the total amount currently in Jenna’s account?

$50 + 3($15) - $10 - $25 = $60

1. John had 30 brownies and 6 friends at his house. In order to share the brownies equally between his friends, how many brownies can he give to each friend?

30/6 = 5 brownies to each friend